Joint Harbor Operations Centers

USCG-USN joint command in action.

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By mid-day on September 11, 2001, America was riveted to the news, four airliners hijacked, the twin towers collapsed, and the walls of the Pentagon had been breeched. The homeland was at war. With no indication of Al Qaeda's next target, the U.S. Coast Guard and U.S. Navy did what our services have always done in a crisis: improvise and overcome. The Coast Guard shifted to its consequence management phase and responded in the legacy roles of search and rescue and port security. In New York, we assisted in the evacuation of approximately one million stranded Manhattan commuters, and delivered critical supplies and first responders across the harbor.

To protect the key infrastructure of the nation's strategic commercial ports from seaborne terrorism, regulated navigation areas and mandatory notice of arrival regulations were implemented, enforced by medium endurance cutters positioned offshore, while patrol boats secured the anchorages and approaches. Along our navigable waterways, response boats patrolled power plants, refineries, and military outload facilities, while armed 180-foot buoy tenders were positioned on the Potomac River to secure the waterside approaches to the national capitol region.

Figure 1: Coast Guard Cutter *Wrangell* and the *USS Ronald Reagan* on deployment in the Persian Gulf. Photo courtesy U.S. Navy.

Every available asset was pressed into service, protecting infrastructure of national importance. By nightfall on September 11, the Coast Guard and Navy initiated a hastily constructed "prevent defense" to secure thousands of miles of coastline, harbors, and waterways. The Navy locked down land and waterborne perimeters of their bases, and stepped up around-the-clock

patrols of shipyards and supply terminals. In joint ports and regional operations centers, base commanders, USCG operational commanders, and Captains of the Port recalled resources and revalidated patrol responsibilities. The Navy provided four fully crewed 170-foot, Cyclone class coastal patrol boats to fill the critical gap between the Coast Guard's 110-foot and 210-foot cutter support. The 170s retained Navy crews, augmented by a team of specially trained Coast Guard law enforcement officers, originally deployed on maritime homeland security missions. The Coast Guard reciprocated by sending four 110-foot Island class patrol boats to the Persian Gulf (Figure 1).

The Airbag

No one better described our joint response posture than ADM Thad Allen, Commandant of the Coast Guard, who was then serving as commander, Atlantic Area. ADM Allen defined the post-9/11 consequence management mission using a reference to a car accident. In ADM Allen's description, "Our airbag worked well."

As the cleanup continued and the heightened operations tempo wore on, it became apparent to our field commanders and our budgeters that the "full court press" surge response was not sustainable; we were consuming underway and flight hours at an alarming rate. The task at hand was daunting. How can we protect the ports without bankrupting our resources? We needed a mechanism to detect and assess threat, warn and defend potential targets, and, most importantly, keep our airbag from inflating. We needed detailed information and intelligence, better visibility of vessel location and container contents from trusted agents. We needed tight facility security, both at home and abroad, and a method to assess risk against economic benefit. Simply stated, we needed security that would convince an adversary not to attack.

Birth of the Sector

The uncertainty and immediacy of the threat at hand, combined with the unrelenting request for resources, served as the catalyst to reorganize Coast Guard field units into a truly unified command. Just as the Department of Homeland Security was formed to coordinate government agencies; the sector unified operational shore functions into a single command, encompassing all missions under one local operational commander. The time-honored groups (responsible for most mobile assets) and marine safety offices were realigned and renamed "sectors," consolidating all Coast Guard missions in a geographic region. Port customers had a single phone number to access search and rescue, environmental response, fisheries, vessel inspection, aids to navigation, bridges, auxiliary, and all other services. VADM James Hull, former commander of Coast Guard Atlantic Area described the concept as "one belly button to push" when the public or port partners need service. In actuality, this realignment to a unified command was not new. Three prototype units, identified as "activities," had been fully operational in New York, Baltimore, and San Diego and were receiving high marks for continuity and efficiency. Activities New York and Baltimore both ground-zero tested during the terrorist attacks in New York and

Figure 2: Sector command center structure. USCG graphic.

Washington, D.C., confirmed the value of unified commands in meeting dynamic security requirements. The demands of the post-9/11 environment dictated a better method of dispatching critical resources. The sector would be the construct to implement this synergy in the field.

The Sector Command Center

The heart of the sector is its command center (Figure 2). It provides the sector commander a continuously staffed command and control (C2) watch capable of directing operations across the entire mission spectrum. On a typical day, it may plan the offshore evacuation of an injured mariner, investigate a mystery oil spill, or dispatch a crew to repair a malfunctioning navigation aid. In its homeland security missions, the command center guards against terrorist attacks in the maritime domain; protects our population centers, borders, and critical infrastructure; safeguards our marine transportation system; and

minimizes damage/aid recovery following an attack (in other words, it "inflates the airbag").

In executing homeland security missions, major emphasis has been placed on coordinating and interacting with federal, state, and local port partners to rapidly share information and intelligence and develop a common operating picture (COP). The COP is a display of relevant information shared by more than one organization. It provides a display of friendly, suspect, and unknown tracks on a chart and is exportable to fellow partners and responders within the sector.

In selected ports, the command center is equipped with the Hawkeye Core C2 sensor suite (see related article in this edition). The Hawkeye is tailored to each individual port and links sensor input, data and information systems, and command and control capability. This system may include short- and long-range cameras, harbor and coastal radars, and automatic information systems.

A Case Study:
Morphing to a Joint Harbor Operations Center
The Coast Guard's Atlantic and Pacific areas and the Navy's Second and Third fleet share common security requirements in several strategic ports. The USN maintains responsibility for antiterrorism force protection of its floating assets, both underway and in port. The Coast Guard retains responsibilities for ports, waterways, and coastal security antiterrorism and counterterrorism activities, including support of military outloads.

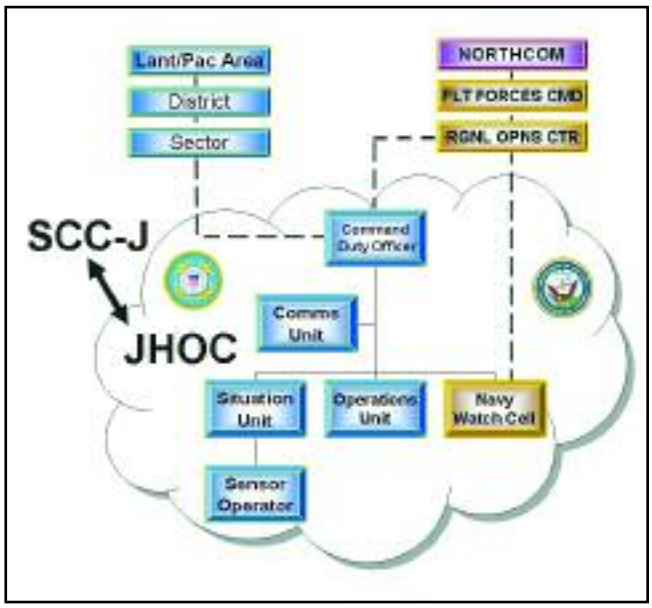

Figure 3: JHOC command structure. USCG graphic.

By the end of the day on September 11, 2001, the Hampton Roads, Va. and the San Diego waterfronts were closed, under Captain of the Port orders. Naval Stations Norfolk and San Diego had initiated a point defense of their facilities with continuous patrols. As days passed and the ports returned to normalcy, there was an imminent need for heightened security within the harbors and a need to know what adversary might be approaching. Regulated navigation areas were made law, and notice of arrival mandates were expanded from 24 hours to 96 hours, both enforced by 24/7 surveillance watches.

The Coast Guard and Navy, however, were expending overlapping resources to acquire common security goals. In several "blue and khaki" ports, the sector command centers were undergoing a complete realignment. The joint harbor operations center (JHOC) evolved, due to the immediate need to share information, enhanced situational awareness, and coordinated command and control.

In Hampton Roads, the first step in creating the prototype joint harbor operations center was to control the high ground, by "evicting" the tenants of Norfolk's pier-side degaussing tower. The degaussing tower was a facility used during the cold war to monitor and reduce, if necessary, the magnetic signatures of departing naval vessels. Tower personnel were in the process of standing down when the post-9/11 greater need arose. By today's standards, the prototype JHOC was a fixed "bow watch," a pure stop-gap measure, pooling Navy and Coast Guard duty standers, using "big eyes" (powerful, and, consequently, very large binoculars); night vision goggles; and a UHF/VHF C2 network to detect a threat to the port.

Over the next four years, the JHOCs worked to leverage technology to support their security missions. JHOCs incorporate the Hawkeye core C2's radar, video, infrared, AIS receivers and its watch standers have expanded to incorporate a blue/khaki (USCG/USN) watch team.

JHOC vs. Sector Command Center
Simply put, a JHOC (Figure 3) is a sector command center with a permanent Navy watch stander presence. The JHOC facilitates planning, monitoring, and response to natural disasters, accidents, or deliberate attacks that would affect ships, craft, or waterfront infrastructure within the sector. In some publications a JHOC is referred to as a "sector command center – joint" (SCCJ). Simply stated, a SCCJ = JHOC, same function, different names. Both are supervised by the

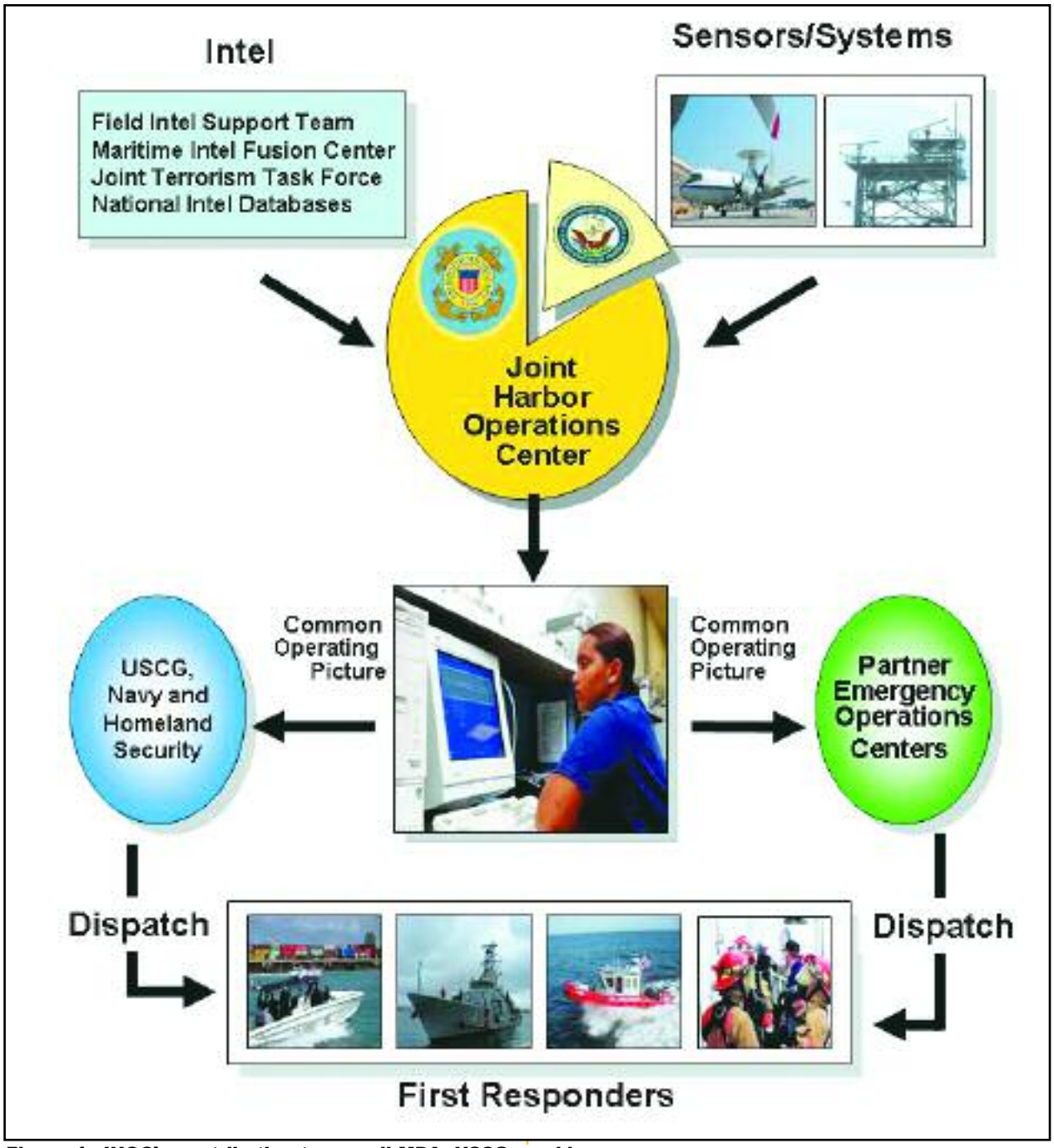

Figure 4: JHOC's contribution to overall MDA. USCG graphic.

sector's command duty officer and linked to the Navy's regional command center and, subsequently, Fleet Forces Command and, ultimately, U.S. Northern Command. In the event that a situation develops in a JHOC that warrants briefing the next higher echelon of command, for example, each lower echelon of each service will brief the next higher echelon.

Wherever possible, other local, state, and federal agencies with responsibility for harbor security are encouraged to participate. The JHOC leverages the sensor, detection, communication, and decision-making systems and personnel of each partner in order to produce a more accurate and timely COP.

The JHOC's unique blend of responsibilities ensure that in either a homeland defense response or a homeland security event requiring collaboration between multiple port partners, all participants are engaged in developing courses of action and are aware of each other's capabilities and readiness at the critical time. The JHOC is intended to be a coor-

dination center for joint Navy and Coast Guard missions, but will not supersede the authority of the on-scene commander.

Just as the physical construction of the JHOCs has been a work in progress, doctrine and policy formation have been equally dynamic. JHOC supervisors compare it to changing a tire on your car while it's speeding down the interstate. Concepts of operations (ConOps) are being written and rewritten to address the stakeholders in this process. USCG sector commanders, USN regional commanders, and USN numbered fleet commanders are being asked to implement and operationalize these ConOps, develop consistent unit standard operating procedures (SOPs), and align other existing SOPs in order to maximize the capabilities brought to bear through this relationship.

The Left Coast JHOCs

JHOC San Diego is fully operational and has been expanded to host watch standers from Navy Region Southwest, San Diego Harbor Patrol, 911 harbor dispatch, Customs and Border Protection (CBP), and the California National Guard Fleet Air Control Surveillance Facility liaison.

JHOC Seattle, currently under construction, could well become the center of excellence for the program. As opposed to the limitations of expanding existing command centers, Seattle is a new start. The blueprints include ample watch and administrative space for Navy, Region Northwest, CPB, Washington State Patrol, and other key port partners that share incident command responsibilities. Also included in the JHOC command center is the Puget Sound Vessel Traffic Service (VTS). Working closely with Canada, VTS Puget Sound shares vessel track data with Canadian VTS locations under a U.S./Canadian cooperative Vessel Traffic Management System (CVTMS).

The Right Coast JHOCs

JHOC Hampton Roads has matured, with a sensor array covering the port of Hampton Roads, Va., the approach to Chesapeake Bay, and the Elizabeth River. CAPT Trapp, newly assigned Hampton Roads sector commander, remarked, "as one of the East Coast's biggest commercial ports and home to the world's largest naval fleet, we are extremely fortunate to have one of our nation's first Joint Harbor Operation Centers as its front line to port safety and security."

On May 1, 2006, the commanders of USN Second Fleet and USCG Atlantic Area signed a memorandum of understanding, outlining a joint commitment resourcing a second east coast JHOC in Jacksonville, Fla. Due to the sector's space limitations, the JHOC will initially be located at Naval Air Station Jacksonville with an initial operating capability in December 2006. As a result of a tenacious joint USN/USCG effort, critical sensor coverage in the St. Johns River; and the Ports of of Jacksonville; Mayport; and St. Marys, Ga. has achieved a four-year head start.

Over the Horizon

Figure 4 depicts JHOC's contribution to overall Maritime Domain Awareness. It represents a command and control system that fuses multiple forms of intelligence to give the sector commander, Navy, and port partners timely actionable intelligence. Although it remains a work in progress, it is tightly coupled to ongoing Coast Guard and Navy overarching initiatives. This was highlighted during USCG VADM Peterman's tour of JHOC Hampton Roads, shortly after assuming command of Atlantic Area in May 2006. In his visit, he remarked that developing and sustaining key coalitions is a priority in our new Commandant's national initiatives. "Admiral Allen has invigorated our efforts to align resources with the department, sister services, and partner agencies. The recently published 'National Fleet Policy' focuses on better integration of Coast Guard and Navy operations and assets. The JHOC supports these goals by providing regions and sectors a command center force multiplier to operate more effectively at a time when missions are threatening to outpace our response capability."

VADM Mark Fitzgerald, commander of the Navy's Second Fleet is equally optimistic on the synergy of combining resources. "The Navy and the Coast Guard have long enjoyed a unique and complimentary relationship. The standup of the JHOCs in Hampton Roads, Jacksonville, and future locations will not only serve to eliminate any sea/shore seam existent in our Maritime Domain Awareness posture, but will solidify and strengthen this relationship even more."

About the Author:
Mr. Thomason's military service spans 34 years. He retired as the chief of staff of the Fifth Coast Guard District. He presently serves as a CACI contractor assigned to the MDA Directorate; loaned to Atlantic Area, with marching orders to "operationalize" Maritime Domain Awareness. As Atlantic Area's Joint Harbor Operations Center project officer, he recently fulfilled a partnership with the Navy's Second Fleet to resource a JHOC in Naval Region Southeast/Sector Jacksonville's AOR. JHOC Jacksonville is expected to be operational in early 2007.